

Lawrence Livermore National Laboratory

DOE NCSP Website Nuclear Data Request Form



Chuck K. Lee

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at Oak Ridge National Laboratory, March 1-2, 2011

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Topics of this briefing

- **Nuclear Data Request Guidelines**
- **Beta version of Nuclear Data Request (NDR) Form**
- **Future plans**
- **Q & A**



Nuclear Data Request Guidelines

Nuclear Data Request Guidelines

There are three principal requirements for a well-posed request:

1. An individual request should be **focused**. It should identify a single target nuclide (e.g., ^{241}Pu), a single reaction (e.g., n,fission), a well defined energy range (e.g., 0.8 – 10.0 Mev), and an accuracy requirement (e.g., $\pm 5\%$ from 0.8 – 4.0 Mev and $\pm 10\%$ from 4.0 – 10.0 Mev). A vague or generic request (e.g., All reactions for the Pu isotopes to within 1% from thermal to 10 Mev) cannot be addressed.
2. An individual request should be **justified**. The requestor should describe the application area requiring the data and make a case that the existing data are inadequate for this application. Essentially the requestor is describing why the data are needed.
3. An individual request should document the **impact**. Generally, impact deals with matters such as safety, reliability, and cost. For example, if the requester can make a case that better knowledge of a neutron absorption cross section (to within specified accuracy limits) could lower the cost of transporting spent nuclear fuel by significant amounts, this would qualify as strong support for the request on the basis of cost impact.




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Nuclear Data Request form main page



**Beta
Version**

*U. S. Department of Energy
Nuclear Criticality Safety Program*

[NCSP Home Page](#)
[NDR Request Form](#)
[Privacy & Legal Notice](#)

The purpose of this webpage is to provide a mechanism for End Users to submit Nuclear Data Need Request for consideration/processing. Nuclear Data Need Request guidelines and an example links (including the Nuclear Data Need Request form) are also provided. If you have any questions regarding the process, please contact the NDAG Chairperson, R.D. McKnight at rdmcknight@anl.gov

- [Submit NDR request](#)
- [Nuclear Data Need Request Status](#)
- Administrative access only
- [NDAG Approval \(NDAG Chair only\)](#)
- [NCSP Manager Approval \(DOE HQ only\)](#)
- [Guidelines for a Nuclear Data Request](#)
- [Sample Nuclear Data Request](#)



Nuclear Data Request Form

NUCLEAR DATA REQUEST FORM

NOTICE: The End User must verify all information is **UNCLASSIFIED**

Please provide the following information:

Requestor Name:

Last Name: [*]

First Name: [*]

Middle Name:

Organization: [*]

E-mail Address: [*]

Retype E-mail Address: [*]

Telephone No.: [*]

[*] Required fields

Target Nuclide: [*]

Reaction/Process: [*]

Incident Energy Range: [*]

Requested Accuracy: [*]



Nuclear Data Request Form – cont.

Application Area: [*]

Justification: [*]

Impact:

The Requestor acknowledges all information is approved for public release. [*] ☐ I Agree

DC Name or Review and Release Number:

Submit

Reset



Nuclear Data Request status page

Nuclear Data Need Request Status

Record Number	Date	Name	Organization	Target Nuclide	Reaction/Process	Incident Energy Range	Requested Accuracy	Status
103	2010-10-27	Lee, Chuck K	LLNL	Cm-244	n,fission	Thermal - 1 MeV	±5% up to 1 keV ±10% 1 keV – 5 MeV	Pending
104	2010-10-29	Lee, Chuck K	LLNL	Th-227	n,fission	Thermal - 1 MeV	±5% up to 1 keV ±10% 1 keV – 2 MeV	Pending
101	2010-10-27	Lee, Chuck K	LLNL	Np-237	n,fission	Thermal - 1 MeV	±5% up to 1 keV ±10% 1 keV – 2 MeV	Pending
105	2010-10-29	Lee, Chuck K	LLNL	Th-229	n,fission	Thermal - 100 KeV	±5% up to 1 keV ±10% 1 keV – 100 Kev	Pending
106	2010-10-29	Lee, Chuck K	LLNL	Th-234	n,fission	Thermal - 1 MeV	±5% up to 1 keV ±10% 1 keV – 2 MeV	Pending
107	2010-10-29	Lee, Chuck K	LLNL	Th-233	n,fission	Thermal - 1 MeV	±5% up to 1 keV ±10% 1 keV – 2 MeV	Pending
108	2010-10-29	Lee, Chuck K.	LLNL	Th-231	n,fission	Thermal - 1 MeV	±5% up to 1 keV ±10% 1 keV – 2 MeV	Pending
109	2010-11-01	Lee, Chuck K	LLNL	Np-235	n,fission	Thermal - 2 MeV	±5% up to 1 keV ±10% 1 keV – 2 MeV	Pending
110	2010-11-05	Lee, Chuck K	LLNL	Pu-240	n,fission	Thermal - 2 MeV	±5% up to 1 keV ±10% 1 keV – 2 MeV	Pending
102	2010-10-27	Lee, Chuck K	LLNL	Am-242	n,fission	Thermal - 0.1 MeV	±5% up to 1 keV ±10% 1 keV – 2 MeV	Approved



NDAG approval process page

PROCESS NUCLEAR DATA NEED REQUEST

This NDAG home page is intended to provide NDAG chair to process Nuclear Data Need Request Form. For NDAG questions, please contact Dick McKnight at (630) 252-6088.

- [Approve Multiple NDR Forms](#)
-



NDAg approval process form

NUCLEAR DATA REQUEST FORM

NOTICE: The End User must verify all information is *UNCLASSIFIED*

Date: 2010-10-27 Status: Pending

Requestor Name:

Last Name: [*] Lee First Name: [*] Chuck Middle Name: K

Organization: [*] LLNL

E-mail Address: [*] lee12@llnl.gov

Telephone No.: [*] 925-422-0482

[*] Required fields

Target Nuclide: [*]
Cm-244

Reaction/Process: [*]
n,fission

Incident Energy Range: [*]
Thermal - 1 MeV

Requested Accuracy: [*]
±5% up to 1 keV
±10% 1 keV - 5 MeV

Application Area: [*]
Reprocessing, fabrication and storage of Advanced Recycle Reactor (ARR) Fuel

Justification: [*]
LWR fuel. Improved data for the Np-237 fission cross section, particularly from thermal through the resonance region (~ 1 keV) will reduce conservative margins in processing volumes.



NDAG approval process form – cont.

Impact:
Analyses have not yet been performed to quantify the improved throughput and cost reductions to be achieved with uncertainty reduction in the reactivity of these processing streams.

NDAG Chairperson comments:[6000 chars max]

NCSP Manager comments:[6000 chars max]

NDAG Section Only

Tracking/Unique Number: UO7LBSG2

NDAG Actions: Pending

Concurrence (Type Name):

☐ No New Measurement Needed

☐ Recommend NDR Approval

NCSP Approval

NCSP Manager Approval NDR:

The Requestor acknowledges all information is approved for public release. ☒ I Agree

DC Name or Review and Release Number: Chuck K. Lee



NCSP Manager approval process page

PROCESS NUCLEAR DATA NEED REQUEST

This NDR home page is intended to provide DOE NCSP Manager to process Nuclear Data Need Request Form. For NDR questions, please contact Nichole Ellis at (803) 381-3710 or ellis_9899@msn.com.

- [Approve Multiple NDR Forms](#)



NCSP Manager approval process form

NUCLEAR DATA REQUEST FORM

NOTICE: The End User must verify all information is **UNCLASSIFIED**

Date: 2010-10-27 Status: Pending

Requestor Name:

Last Name: [*] Lee First Name: [*] Chuck Middle Name: K

Organization: [*] LLNL

E-mail Address: [*] lee12@llnl.gov

Telephone No.: [*] 925-422-0482

[*] Required fields

Target Nuclide: [*]
Cm-244

Reaction/Process: [*]
n,fission

Incident Energy Range: [*]
Thermal - 1 MeV

Requested Accuracy: [*]
±5% up to 1 keV
±10% 1 keV - 5 MeV

Application Area: [*]
Reprocessing, fabrication and storage of Advanced Recycle Reactor (ARR) Fuel

Justification: [*]
LWR fuel. Improved data for the Np-237 fission cross section, particularly from thermal through the resonance region (~ 1 keV) will reduce conservative margins in processing volumes.



NCSP Manager approval process form – cont.

Impact:
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NDAG Chairperson comments:[6000 chars max]

NCSP Manager comments:[6000 chars max]

NDAG Section Only

Tracking/Unique Number: UO7LBSG2

NDAG Actions: Pending

Concurrence (Type Name):

☐ No New Measurement Needed

☐ Recommend NDR Approval

NCSP Approval

NCSP Manager Approval NDR:

The Requestor acknowledges all information is approved for public release. ☒ I Agree

DC Name or Review and Release Number: Chuck K. Lee

Submit Cancel Print Page



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Future plans for Nuclear Data Request form

- **Continue to work with Dick McKnight and Nichole Ellis to further define Nuclear Data Request form**
 - Enhance various levels of NCSP management approval processes
 - Provide some kind of on-demand pop-up text box description features
- **Maintain records for all Nuclear Data Request experiments/data**



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Questions or Suggestions?

Dick McKnight

**POC for Comments/Suggestions to Nuclear Data
Request form/process**

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Email: rdmcknight@anl.gov

Chuck K. Lee

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